

A.A.A.S. BULLETIN

VOL. 3

DECEMBER, 1944

No. 12

Published monthly by the American Association for the Advancement of Science. Office of Publication, North Queen St. and McGovern Ave., Lancaster, Pa. Editorial and Business Office, Smithsonian Institution Building, Washington 25, D. C., to which office all communications should be addressed.

Edited by F. R. Moulton and Sam Woodley.

Single copy, 10 cents; annual subscription, \$1.00.

Entered as second-class matter at Lancaster, Pa., March 24, 1942, under the Act of August 24, 1912.

Forty Years of Failures

In four recent articles in the BULLETIN various illustrations of the remarkable social consequences of science and its applications in the past forty years have been briefly outlined. A basic fact is that there has been within a little more than a generation a four-fold average increase in production per hour of human labor, with a resulting unparalleled decrease in drudgery and increase in the comforts and luxuries of life. The wealth and leisure thus created are releasing continually from productive labor to high-school studies more American boys and girls than there are inhabitants in any one of forty-four of our forty-eight states. Opportunities for out-of-school education which have become available through libraries and serial publications and the radio and various cultural organizations have kept pace with those provided in our schools. Finally the prevention, control and cure of disease by sanitary and medical science have increased the average length of human lives in this country by 25 percent since 1900.

These astounding accomplishments of the generation now passing are, however, not the full story. There have been failures and disappointments and shattered hopes. Society, like the individual, is a mixture of what is noble and what is base, with one quality sometimes in the ascendancy and sometimes the opposite one. In the past we have been too confident that we should realize our highest aspirations and too little concerned about our weaknesses, with the result that our expectations have fallen far short of being realized.

The enormous capacity of this country to produce food and to manufacture goods is illustrated by its efforts in the present war, and equally, if

less spectacularly, in times of peace. In 1941, for example, more than 34,000,000 motor vehicles were registered in the continental United States, the owners of which paid almost \$900,000,000 for licences and other fees to the states, and more than \$1,500,000,000 in Federal taxes on alcoholic beverages and tobacco. Yet it has been authoritatively stated that one-third of the population of this country is ill-fed, ill-housed, and ill-clothed. These deficiencies have been due to many causes—to the misfortunes of life, to unemployment, to incompetence, to crime, and sometimes to oppression by the strong.

Even education has fallen far short of what was expected 40 years ago. According to the U. S. Census of 1940, more than 4,700,000 of our population over 20 years of age had completed less than three years of formal elementary school work, and in recruiting for our armies in this war more than a quarter of a million of our young men who were physically qualified to serve in our armed forces were rejected because of lack of sufficient mental capacity and education to enable them to perform satisfactorily the simplest duties of enlisted men. Both the Army and the Navy have complained that young men entering these services had no adequate command of the educational subjects they had taken in our schools.

But graver deficiencies are expressed by statistics of defectives and delinquents. The number of mental defectives and epileptics in state institutions increased from about 40,000 in 1920 to over 98,000 in 1940. The number of patients in state hospitals and a few other hospitals for mental disease increased from about 210,000 in 1920 to about 400,000 in 1940.

The statistics of juvenile delinquents are equally disquieting. State institutions for delinquents received under court orders, in 1933, more than 17,000 boys and girls under 21 years of age, of whom 57 were sentenced for murder, over 2,000 for burglary and over 4,000 for larceny. The convictions were most numerous among those in the adolescent years from 14 to 17.

Juvenile delinquencies are partly reflections of lawlessness among adults. Omitting consid-

eration of minor crimes, the homicide rate increased in this country by 40 percent between 1900 and 1940, the number of cases of manslaughter rising to a total of more than 8,000 in the latter year. The suicide rate also increased by 40 percent in the same interval, the number of cases of self-destruction being nearly 19,000 during 1940, or more than 50 per day. At the beginning of 1940 there were more than 170,000 prisoners in State and Federal prisons. Speed has been taking its toll of human lives in various ways, nearly 35,000 persons having died from motor-vehicle accidents in 1940, with about 20 times as many seriously injured. There were more than 62,000 deaths from other accidents in the same year, a total of nearly 100,000 persons dying largely from carelessness in 365 days.

These distressing evidences of grave defects among a fraction of our people are presented not because it is pleasant to dwell on human imperfections but because they must be taken into account in order to achieve a better society in the future. Our cities have learned that it is necessary to clean up foci of infection "back of the yards" to protect the health of their communities as a whole. Similarly, it is necessary for a nation to provide opportunities for its underprivileged, aid for its incompetents, and effective restraints for its criminals and other antisocial elements in order to evolve into such a society as has been dreamed of throughout the ages. The Greeks and many later peoples attempted to rest high culture and luxury for the relatively few on the backs of the many; those whose objectives were luxury and ease have been succeeded by the descendants of those who carried the burdens. Those experiments need not be repeated.

Our forefathers in the preamble to the "Constitution for the United States of America" declared they were establishing it "... to promote the general welfare ..." not the welfare of the few. May we never be diverted from that high objective by love of luxury or ambition for power or dreams of glory. Railroads and automobiles and airplanes and the telegraph and telephones and the radio and vast technological achievements have made the millions of inhabitants of this continent in effect near neighbors. As neighbors they must encourage and support what is for "the general welfare" in its broadest sense and for precisely the same reason restrain what is evil. Indeed, this must be done on a world scale if the innocent men, women, and children of this world are to be saved from the immeasurable miseries of wars.—F.R.M.

Destruction of Books

One of the greatest destructions of books and means of making books in the history of the world occurred a little less than a year ago, on December 3, 1943, when Allied air forces, following an attack about two months earlier, dropped 1,500 tons of bombs in twenty-five minutes on the heart of Leipzig, Germany. The extent of the devastation has been reported by Walter Meier, in the *Neue Schweizer Rundschau*, Zurich, and by a correspondent in the *Svensk Bokhandelstiding*, and both articles have been translated into English by Eleanor Starkey.

Leipzig has been noted throughout the world for its Book City in which a large fraction of German publishing and printing was centered. The University Library, founded in 1543, contained more than a million volumes. The Deutsch Bücherei, a depository of all German language books published since 1913, contained nearly two million volumes. At Leipzig there were a dozen other important libraries and collections of books in special fields. Such publishers as Baedeker, Brandstetter, Hesse & Becker and Teubner were located in Leipzig. Their books were known, admired and used, not only throughout Germany but in every country in which science and scholarship have flourished.

The destruction of the heart of Leipzig was not retaliation for the blasting of Warsaw or the wanton bombing of civilians and cities in Holland and Belgium, or for the deaths of thousands of English women and children from German bombs, or for scars on St. Paul's Cathedral and the Houses of Parliament and Westminster Abbey and the Greenwich Observatory. Leipzig is a great business and manufacturing center in the heart of Germany from which eight railroads radiate in various directions. To destroy its munitions factories and to cripple its transportation systems are regarded as legitimate military measures. To withhold the explosive and the incendiary bomb would be to sentence, indirectly, many young German and Russian and English and American men to death on battle fields who otherwise might survive the war. And so it is that many military decisions involve not only what will be best from a military point of view, but also what will be least destructive of human lives and of values which cannot be measured or expressed in statistical terms.

In no other country has there been such a concentration of the production and selling of the works of scholars as in Leipzig. Before the rise of Hitler there were in its area known as "Book

City" about 550 publishers, 320 booksellers, and more than 150 concerns doing both publishing and selling. Each year "The International Book Fair" held in Leipzig made this city pre-eminent in the book business and the industry for which it was best known not only in Germany but among scholars everywhere. From Swiss reports it appears that about 90 percent of Book City was destroyed, including not only books and manuscripts but also types, prints, stereotype plates, printing presses and printing stocks of all kinds although it is probable that much of such things had been removed to places of safety. It is likely, too, that a considerable fraction of the skilled personnel formerly employed in the printing and publishing business in Leipzig has been lost in the war.

This dark picture is in a field in which scientists are especially interested. Doubtless somewhat similar destruction of values exists in many other fields in all the European countries at war. But not all destruction of values is associated with physical destruction or even with the loss of lives or with wounded bodies and minds. There is also destruction of ideals and hopes for a better future. In this broader sense this country, and in fact the whole world, is suffering disaster. We can only strive earnestly to derive from these tragic experiences the determination and the wisdom to turn human energies from total war to total peace on earth and good will toward men.

Election of Officers of the Association

Election of officers of the Association by mail ballot was so satisfactory in 1942 and 1943 that the Council at the Cleveland meeting on September 11 voted to use the same method again this year.

It will be recalled that the Constitution of the Association provides that the Council shall elect officers of the Association. The Council consists of the president, the vice presidents, the permanent secretary, the general secretary, the treasurer, the secretaries of the sections, the members of the Executive Committee, one fellow elected by the Pacific Division, one fellow elected by the Southwestern Division, eight members elected by the Council, a total of about 50 members, and about 200 members who are elected independently by the affiliated societies and the affiliated academies of science. As a consequence of duplications in election of members of the Council by affiliated societies and affiliated academies of science, there are at present 229 members of the

council instead of the 255 there would be if all affiliated societies and academies had elected different representatives on the Council. Accordingly 229 ballots for officers of the Association were sent to members of the Council on November 20.

Nominees for President of the Association were made by mail ballot of the Council last August. The names of 18 of these nominees were placed in order by lot on a preference ballot which was sent to the entire membership of the Association on October 1. The following table contains the result of the membership ballot and the first Council ballot, arranged in order by lot.

<i>Name and field</i>	<i>General Member- ship vote</i>	<i>First Council vote</i>
Woodworth, R. S. (psychology)	331	8
Kraus, E. J. (botany)	212	3
Ogburn, W. F. (sociology)	174	2
Livingston, B. E. (plant physiology)	181	5
Adams, Roger (chemistry)	454	10
Harrison, R. G. (zoology)	334	5
Shapley, Harlow (astronomy)	918	37
Daly, R. A. (geology)	207	4
Wickenden, W. E. (engineering)	193	3
Bush, Vannevar (engineering) ¹	618	0
Carmichael, Leonard (psychology)	201	1
Robbins, W. J. (botany)	160	2
Conant, J. B. (chemistry)	951	30
Guyer, M. F. (zoology)	193	2
Ward, Henry B. (zoology)	165	4
Kettering, C. F. (engineering)	1,050	66
Wrather, W. E. (geology)	140	2
Richards, A. N. (pharmacology)	280	5
Total	6,762	189

¹ Announced he could not serve if elected.

A year ago, in 1943, the general membership cast 6,228 ballots for president of the Association, and the Council 193 votes.

Last year the largest number of votes for president on the first ballot was 45, and three ballots were required in order to get a majority of all votes cast for any nominee. The second ballot by the Council this year was sent out on December 5 and will be counted on December 18. The names of the other officers elected by the Council will be announced when the announcement of the election of the president of the Association for 1945 is made.

Symposium Publications of the Association

The symposium publications of the Association are becoming one of its most effective means of advancing science. In about six years 17 volumes have been published and two more are now

being printed, one entitled "The Physiology and Chemistry of Hormones" and the other entitled "Mammary Tumors in Mice."

All the symposia except the two now in press were presented at meetings of the Association. They do not consist of a number of unrelated papers but mature contributions to carefully planned programs on special subjects of high importance. For example, there have been symposia on Tuberculosis, Mental Health, Aerobiology, and Surface Chemistry.

Symposia of the Association in a number of instances were organized and presented by groups of cooperating specialists in somewhat different but related fields. The large volume on Mental Health is an illustration. This book consists of a group of discussions of methods in psychiatric research, another group of discussions of causes of mental disease, another on relation of environment to mental health, another on mental health administration, and a final group on education and training for mental health services. As distinct as each of these groups of papers is from the others, each throws light on all the remainder with the result that the whole in a sense is greater than the sum of all its parts.

Perhaps the volume on Aerobiology is an even better illustration of the enrichment of a broad area by integrating its parts. This symposium begins with a group of papers on the transmission through the exterior air of various living organisms—fungus spores, microorganisms, plant pathogens, and insects. For example, spores of wheat rust may be carried a thousand miles by winds with destructive consequences for farmers, and at the same time the new races appearing by hybridization and mutation present questions of great importance for geneticists. Aerobiology is concerned also with the transmission of disease by and through the air in schools and churches and rooms wherever people congregate, with all the resulting public health problems. Several contributors to this volume discussed also the various means (germicidal radiations, etc.) of sterilizing air and related methods of preventing infections.

These nineteen symposium volumes of the Association contain about 4,000 quarto pages ($7\frac{1}{2} \times 10\frac{1}{4}$ inches). When the two volumes now in press shall have been completed, almost 30,000 copies will have been printed. The largest sales have been of Human Malaria, more than 1,500 copies of which are being used by our armed forces wherever malaria is prevalent. This volume treats every aspect of the disease, including the various species of parasites and methods

of distinguishing among them, the mosquito vectors, epidemiology, pathology and immunity, treatment of the disease, and its control and eradication.

The 19 symposium volumes, including the two being printed, have cost more than \$50,000. The books are priced on the basis of estimates by experts in the respective fields of the number of copies that can be sold, the purpose being to cover by a small margin the cost of manufacture and selling with no charge for organizing and presenting them or for editorial work. Sales of the 17 volumes already in circulation have somewhat more than covered the cost of the 19 volumes.

Orders for the symposium volumes have been received from every continent and from all important countries throughout the world. Standing orders from libraries for their purchase are steadily increasing. About 20 tons of them have been shipped from the office of the Permanent Secretary. Although only one new volume has appeared in the past two years (no meetings of the Association having been held because of the war), yet in the twelve months ended last September 30, 2,292 copies of the Association's symposium volumes were sold. Their shipping weight was over two tons.

As to the future, it seems likely that the symposium publications of the Association will steadily increase in number and importance. They bring together in one place comprehensive, documented surveys of well-defined special areas of science written by eminent authorities in the respective fields. The Association can advantageously distribute such contributions to scientists because of its large and varied membership throughout the world and because of the wide circulation of its journals.

The January Scientific Monthly

Since the issue of December, 1938, Dr. F. R. Moulton's name has appeared on the masthead of *The Scientific Monthly* as one of its editors. Now, at his own request, he is retiring from active participation in the editing of the *Monthly*. He will, however, give the editor the benefit of his advice and in other ways will continue to serve the *Monthly*.

At the time of writing, an exact table of contents of the January issue cannot be given, but it is expected that the following articles will appear.

Dr. Alexander Skutch, the biological recluse of San Isidro del General, Costa Rica, has written a fascinating story of the *Cecropia* tree, "The most enigmatic tree of tropical America." Call-

ing upon his broad experience in the Tropics, he discusses the possibility that ants, which live in the hollow stems of the *Cecropia* tree, benefit the tree by protecting it against animal predators. In the course of his discussion some of the flora and fauna of tropical America pass in review before the reader.

It is inevitable in wartime that something connected with the war effort should appear in each issue of the *Monthly*. Three such papers are scheduled for the January issue. The first is by J. Edgar Hoover, the well-known director of the Federal Bureau of Investigation. Mr. Hoover shows that the applications of science in the F.B.I. Laboratory have increased in number and variety by reason of the antisabotage work conducted by the Bureau. Physical instruments and chemical methods are in daily use in the examination of material evidence submitted to the Laboratory. Second, Professor Chauncey D. Harris of the University of Chicago presents a concise description of the Ruhr, its past industrial importance to Germany, and the future importance of its coal fields in the reconstruction of Europe. Third, Dr. M. H. Trytten, Director of the Office of Scientific Personnel of the National Research Council, gives his reasons for believing that American policy during the war has failed to provide for training of research personnel that is increasingly needed now and will be needed after the war. He says: "We have tacitly acquiesced to the increasing atrophy of that very capability of the American people which has been of the most value in winning the war." Factual evidence of the present serious situation is presented.

Temporarily getting away from the war, Dr. Dorrit Hoffleit of the Harvard Observatory (now engaged in ballistics research at Aberdeen, Maryland) takes the reader into the realm of comets and meteors and shows that, despite the war, research on these spectacular bodies is being conducted everywhere, even in Russia and Germany.

Scarcely anyone believes that education in any field or subject is satisfactory, and an editor can get an article on education at the drop of a hat. Dr. Anne Roe of Yale is concerned about present-day education in the schools on the effects of alcohol and tells the reader what she thinks should be done about it. Dr. Paul F. Brandwein of the Teachers' College of Columbia University takes issue with Dr. C. I. Glicksberg, who previously advocated in the *Monthly* extension of scientific education in the schools. He points out that assertions made as to the value of this or that kind of education need scientific study before they are accepted.

Dr. C. A. Browne, the eminent historian of chemistry, gives the reader a welcome relief from the problems of the present; he goes back to the time of Thomas Jefferson and describes Jefferson's connection with the initial development of agricultural chemistry in this country.

Modern agricultural chemistry includes the study of viruses. In a brief article F. C. Bawden, Rothamsted Experimental Station, England, reviews the present knowledge of the nature of viruses.

Dr. N. A. Court, Professor of Mathematics at the University of Oklahoma, departs somewhat from his customary role as a mathematician to discuss the philosophy of geometry, or how we have arrived at our geometrical knowledge.—F.L.C.

Honorary Junior Members

On June 28, 1938, the Council passed a resolution to offer to each affiliated academy of science the privilege of nominating each year one boy and one girl from its junior academy or from junior science clubs within its territory for a one-year Honorary Junior Membership in the Association, without the payment of dues; and to give each honorary junior member a suitable certificate of membership, the programs of the meetings of the Association, and preliminary announcements and reports of its meetings. Science Service gives each honorary junior member a subscription to Science News Letter for the term of his or her membership.

In order that honorary junior members may receive their honors before they finish their secondary school work, they should be nominated at the beginning of their senior years. Upon receiving their certificates of membership from the Association their attentions are directed toward the great world beyond their immediate environments and to the possibilities they have of playing constructive roles in it. Their ambitions are expanded beyond that of achieving personal success or honor for their school to that of being of service to their country and their fellow men.

The number of honorary junior memberships awarded in each of the years since they were established in 1938 is as follows:

Year	No. of memberships
1939	29
1940	27
1941	29
1942	30
1943	29
1944	16
Total	160

Two of the 33 affiliated academies of science, those of British Columbia and Kentucky, have nominated a boy and a girl for honorary junior membership in the Association each year since these memberships were established. The North Carolina, Pennsylvania, and Texas Academies have lacked only one nomination of the number to which each of them was entitled. The numbers of nominations for honorary junior membership made by affiliated academies of science in the interval 1939-1944, inclusive, are as follows:

Alabama	4
American Institute of the City of New York	2
British Columbia	12
Illinois	8
Indiana	8
Iowa	4
Kansas	10
Kentucky	12
Louisiana	4
Michigan	4
Minnesota	10
Missouri	8
New Hampshire	1
New Orleans	6
North Carolina	11
Oklahoma	10
Pennsylvania	11
St. Louis Academy of Science	8
Tennessee	4
Texas	11
Virginia	2
West Virginia	10
Total	160

Letters from the honorary junior members are invariably so frank and sincere that it is always a pleasure for the officers of the Association to receive them. The most recent of these letters, received from a boy in Maysville, Kentucky, is typical of their character.

I hope you will excuse my delay in answering your kind and inspiring letter. Please do not think that this delay means any lack of gratitude or appreciation on my part for the honor I have received.

It is very difficult for me to tell you how much I appreciate this Honorary Junior Membership; I only hope that I deserve it, and that I am worthy of the confidence which has been placed in me. My chief ambition is to do all I can toward helping establish a better world after the war, and I sincerely hope that my generation will be able to accomplish a lot toward this goal.

Thank you very much for my copy of the Program of your last meeting, for the A.A.A.S. BULLETIN, and for the *Science News Letter*, which I am receiving and enjoying regularly.

Before closing, I would like again to express my gratitude for this Honorary Membership.

(Signed) FRANK QUIGLEY

The Wisconsin Academy of Sciences, Arts and Letters

The Wisconsin Academy of Sciences, Arts and Letters was founded by an act of the Wisconsin Legislature on March 16, 1870. For many years prior to that date there had been a group of distinguished scientists who felt the need of an Academy, and who decided in December, 1869, to call an organizational meeting. This meeting was held on February 16 and 17, 1870, under the sponsorship of 105 persons. Mr. J. W. Hoyt of Madison, the Secretary of the State Agricultural Society, acted as secretary to call and organize the meeting, which was held in the rooms of the society. Among the founders of the Academy were Increase A. Lapham, Philo R. Hoy, and Thomas Chrowder Chamberlin, later President of the University of Wisconsin from 1887 to 1892. Robert D. Irving, a moving spirit within the early Academy, joined it in 1871.

The Wisconsin Academy has met annually since 1870, and in some years has held more than one meeting; the next annual meeting in April will be the seventy-fifth. Meetings have been held at practically all of the educational institutions in the state of Wisconsin, but, until 1941, the Constitution required that every third meeting be held at Madison, where at one time the Academy had a room in the State Capitol, and recently has had a room for its use in the State Historical Society Library. Some of the annual meetings have been held away from heavily populated centers, and yet have attracted good attendances. For example, in 1929 the meeting was held at the Yerkes Observatory of the University of Chicago on Lake Geneva at Williams Bay, Wisconsin. One of the summer hotels was opened for Academy members and a very successful meeting was held. During the past fifteen years the Academy has held annual meetings at the University of Wisconsin, Marquette University, the Milwaukee Public Museum, Lawrence, Beloit, and Ripon Colleges, and the Oshkosh State Teachers College.

The fiftieth anniversary of the Wisconsin Academy in 1920 was the occasion of a special meeting held at the University of Wisconsin. Dr. E. A. Birge was at the time President of both the Academy and the University. The founders of the Academy were honored at a series of convocations, and the University granted the honorary degree of Doctor of Science to Thomas C. Chamberlin, head of the Department of Geology at The University of Chicago, one of the original incorporators of the Academy, and President of the Academy from 1885 to 1887. Ex-president Birge of the University of Wisconsin is still an active member of the Wisconsin Academy, and has been a member continuously since 1875. He has twice served as president, from 1889 to 1890 and 1919 to 1921, and has presented papers at meetings as recently as 1944.

The *Transactions* of the Wisconsin Academy of Sciences, Arts and Letters is the official publication. Thirty-five volumes have been issued to date, but many

of the earlier volumes were issued in parts, so that one part may have constituted the publication for a year. For example, volumes 16 and 17 were each issued in two parts, and each of the parts was made up of six numbers. Recently the *Transactions* have appeared as single volumes of 300 to 400 pages, published annually. Many fields of knowledge have been covered, since the Academy includes divisions of sciences, arts, and letters. Much of the lake work carried on by E. A. Birge, Chancey Juday, and their co-workers has appeared in the *Transactions*, and has been responsible for the title sometimes conferred of "one of the best limnological publications in the United States." The natural resources of Wisconsin have been rather thoroughly reported upon in the *Transactions*; in addition some of the work which has been recorded in preliminary reports has been completed in sister publications of various state agencies. The *Transactions* likewise preserves the work of the late Dr. J. J. Davis on the Parasitic Fungi of Wisconsin, as well as considerable other botanical and zoological work.

The Academy has from time to time issued special publications. One of the best known of these is Baker's "Fresh Water Mollusca of Wisconsin," a two-volume work, published in 1928.

Membership in the Wisconsin Academy has varied from 200 in earlier days to nearly 400 at present, divided into life, honorary, corresponding, and regular members. Life membership is attained either through election after conspicuous service to the Academy or through payment of \$100.00 toward the Academy trust fund. The majority of members are regular dues-paying members (annual dues \$2.00), and at present this group consists of 366 persons. Many members of the Academy are likewise members of the American Association for the Advancement of Science. Some of the members reside outside of the state, but have kept up interest in the Academy after first joining when residents of Wisconsin, or else have maintained membership in order to obtain the *Transactions*. The membership list, in this last respect, contains the names of many leading scientific workers of the United States.

The Wisconsin Academy has recently organized a Junior Academy under the chairmanship of Dr. John W. Thomson, Jr.

Several of the functions of the Academy of the earlier days have been taken over by special organizations. For example, the State Geological Survey was founded largely through the influence of members of the Academy, but this and other special organizations have helped to develop talent that has made itself felt in the later activities of the Academy. As a result the Academy has been able to draw members from many branches of learning, and its annual meetings have stimulated workers in the sciences, the arts, and the letters.

Plans are now underway to celebrate the Diamond Jubilee of the Academy, which will be held in Madison, the original site of the Academy.—BANNER BILL MORGAN, *Secretary-Treasurer*.

Contents Volume III (1944)

January

Animal and Human Inheritance	1
Postwar Education—II. Science	2
AAAS-Gibson Island Research Conferences	3
New Officers of the Association	4
The February Scientific Monthly	4
Further Experiments in Regional Meetings	5
Public Library Reading in 1943	5
The Mission of the Association	6
Mathematics in Education	7

February

A Meeting of the Association	9
Postwar Education III. Science Teaching	10
New Members of the Association	11
Newly Elected Emeritus Life Members	11
The March Scientific Monthly	12
Books Published in 1943	13
AAAS-Gibson Island Research Conferences	13
Mineralogical Society of America	15

March

The Cleveland Meeting, September 11-16	17
Con and Pro	18
Section L Looks Forward	19
Army Education in the Colleges	20
The April Scientific Monthly	21
Proceedings of the Association	21
A Message from Russian Scientists	22
The Seismological Society of America	23

April

A Tree in Spring	25
Further Comments on Human Evolution	26
The Advancement of Science	27
The Central Industrial Area	28
Conference on Food and Nutrition	29
University Publications in Wartime	29
Local Meetings of National Societies	30
The May Scientific Monthly	31
The American Geographical Society	31

May

Academic Freedom	33
Trend of Membership of the Association	34
The June Scientific Monthly	35
The Annual Science Exhibition	35
Hotel Headquarters—Cleveland Meeting	36
Papers for the Cleveland Meeting	37
Petroleum in War	37
Virginia Academy of Science	38
The American Society of Plant Physiologists	39

June

The Middle Man	41
"Academic Freedom"	43
Four-College Genetics Conference	44
The July Scientific Monthly	45
Back Numbers of Journals are Needed	45
Hotel Accommodations—Cleveland Meeting	46
Nonmember and Special Subscriptions	46
The Association Membership	46
Dimensions of Our Galaxy	47
American Society of Parasitologists	47

July

Forty Years of Education	49
Democracy in Science	50
The August Scientific Monthly	51
Notes on the Cleveland Meeting	52
A Very Difficult Decision	52
National Science Teachers Association	53
Early Environment of Eminent Scientists	55
Genetics Society of America	55

August

Extra-Curricular Education	57
"The Middle Man"	58
Dr. Edward Bausch	59
Make Figures Talk	60
The September Scientific Monthly	60
Paper for Publications	61
"Commanding Our Wealth"	62
Sectional Organization of the Association	62
The American Statistical Association	63

September

Forty Years of Public Health	65
Multum ex Parvo	66
Association Publications	67
The October Scientific Monthly	67
A Notable Conference on Alcoholism	68
Apologies and Thanks	69
Lost Life Members	69
The Cleveland Meeting	70
The Michigan Academy of Science	70
North Carolina Academy of Science	71

October

Forty Years of Plenty	73
Education of U. S. Armed Forces	74
The November Scientific Monthly	75
The Cleveland Meeting	75
Association Membership Status	76
New Association Book on Hormones	77
The Association in the Near East	78
Thanks to Generous Members	78
The Kansas Academy of Science	78

November

Thanksgiving	81
Medical Education	82
Notes on October Activities	84
The December Scientific Monthly	84
Changes of Journal	85
News from the Philippine Front	86
The American Microscopical Society	86
The New Hampshire Academy of Science	87

December

Forty Years of Failures	89
Destruction of Books	90
Election of Officers of the Association	91
Symposium Publications of the Association	91
The January Scientific Monthly	92
Honorary Junior Members	93
The Wisconsin Academy of Sciences	94
Contents Volume III (1944)	95

Membership in the Association

Eligibility for Membership

Membership in the Association is open to all persons engaged in scientific work, whether in the fields of the natural or the social sciences; to all amateur scientists, whatever their special interests; and to all who desire to follow the advances of science and its effects upon civilization. Members having made substantial contributions to the advancement of science are eligible for election as fellows.

Dues and Publications

Membership dues are \$5 per year, including subscriptions for the monthly A.A.A.S. BULLETIN and either the weekly journal *Science*, now in its 100th volume, or *The Scientific Monthly*, now in its 59th volume. *Science* is a journal for professional scientists; the *Monthly* is a nontechnical journal for the intelligent public. The Association also publishes technical symposia and nontechnical books on science that are available for members at prices substantially below those to the public.

Organization and Meetings

The Association was founded in 1848, with an initial membership of 461. Papers in its early programs were classified as either natural philosophy or natural history. Now its work is organized under 16 sections and 189 associated societies having a total membership of over 500,000. Its annual meetings are the greatest regular gatherings of scientists in the world.

Nominations and Applications for Membership

Members may submit nominations for membership at any time, and persons desiring to become members can obtain membership application forms from the Office of the Permanent Secretary, the Smithsonian Institution Building, Washington 25, D. C.

Changes of Address

New addresses for the Association's record and for mailing the journals *Science* and *The Scientific Monthly*, as well as the A.A.A.S. BULLETIN, should be in the Office of the Permanent Secretary, Washington 25, D. C., at least two weeks in advance of the date when the change is to become effective.

Officers of the Association

President, Anton J. Carlson; *Permanent Secretary*, F. R. Moulton; *General Secretary*, Otis W. Caldwell; *Treasurer*, W. E. Wrather; *Director of Publications*, F. L. Campbell; *Assistant Secretary*, Sam Woodley.
Executive Committee: Burton E. Livingston, *Chairman*; Roger Adams, Joseph W. Barker, Otis W. Caldwell, Walter B. Cannon, Anton J. Carlson, Arthur H. Compton, Kirtley F. Mather, F. R. Moulton, Elvin C. Stakman, and W. E. Wrather.

